

IN THE CLAIMS:

Please AMEND claims 1-18 and ADD new claims 19 and 20 in accordance with the following:

1. (CURRENTLY AMENDED) ~~A method for~~ evaluating a scattered light signal generated by a scattered light receiver when detecting especially fine particles in a carrier medium, characterized in that the scattered light signal runs comprising running the scattered light signal through a filter algorithm step ~~operation for evaluating to evaluate the scattered light signal subject to specific filter algorithms, and the scattered light signal is filtered differently in the filter algorithm step~~ operation depending being based on its a slope of the scattered light signal prior to comparison with preset threshold values.

2. (CURRENTLY AMENDED) ~~Method in accordance with claim 1, characterized in that~~ The method according to claim 1, wherein the scattered light signal is further run through a calibration operation ~~step for calibration to calibrate the scattered light signal with a reference signal and/or a drift compensation step for adaptation~~ operation to adapt the scattered light signal to prevailing environmental conditions over a time period of at least 24 hours, and/or a temperature compensation step for compensating ~~operation to compensate for the temperature dependency of the radiated light output of a light source, and/or a sensitivity adjusting step for adaptation~~ operation to adapt the scattered light signal to a required sensitivity.

3. (CURRENTLY AMENDED) ~~The method according to claim 2~~ Method in accordance with claim 2 having, wherein an integration amplifier acts as a scattered light amplifier, and wherein characterized in that the integration time of said the integration amplifier is set in the calibration step ~~operation such that the scattered light signal corresponds to a reference signal of a reference indicator.~~

4. (CURRENTLY AMENDED) ~~Method in accordance with claim 2 or 3~~ The method according to claim 2, wherein characterized in that the sensitivity of the scattered light receiver (13) is changed in the sensitivity adjusting step ~~operation by changing the a pulse width of the a drive current of a light source (9) associated with said the scattered light receiver (13).~~

5. (CURRENTLY AMENDED) ~~Method in accordance with claim 2 or 3~~ The method

according to claim 3, characterized in that wherein the sensitivity of the scattered light receiver is changed in the sensitivity adjusting stepoperation by changing the integration time of ~~an~~ the integration amplifier ~~acting as a scattered light signal amplifier~~.

6. (CURRENTLY AMENDED) ~~Method in accordance with claim 5~~The method according to claim 5, wherein, characterized in that the changing of the integration time ~~ensues is~~ incrementally or continuously.

7. (CURRENTLY AMENDED) ~~Method in accordance with claim 4~~The method according to claim 4, wherein, characterized in that the changing of the pulse width ~~ensues is~~ incrementally or continuously.

8. (CURRENTLY AMENDED) ~~Method in accordance with one of claims 2 to 7~~The method according to claim 2, wherein, characterized in that a temperature sensor (23) arranged in ~~the~~ a flow path (7) of the carrier medium is used for the temperature compensation in the temperature compensation operation of the scattered light signal ~~in the temperature compensation step~~.

9. (CURRENTLY AMENDED) ~~Method in accordance with claim 8~~The method according to claim 8, wherein, characterized in that the temperature compensation operation comprises ~~ensues by~~ changing ~~the~~ a pulse width of ~~the~~ a drive current of a light source (9) associated with the ~~said~~ scattered light receiver (13).

10. (CURRENTLY AMENDED) ~~Method in accordance with one of claims 2 to 9~~The method according to claim 2, wherein, characterized in that the scattered light signal is lowpass filtered when ~~its~~ a slope thereof exceeds a pre-defined threshold.

11. (CURRENTLY AMENDED) ~~Method in accordance with one of claims 2 to 10~~The method according to claim 2, wherein, characterized in that a chamber value is averaged over a relatively longer period of time in the drift compensation stepoperation to create a tracked chamber value.

12. (CURRENTLY AMENDED) A ~~S~~scattered light detector ~~for carrying out the method~~

~~in accordance with one of claims 1 to 11, comprising:~~

~~having a housing (1);~~

~~an inlet opening (3) and an outlet opening (5) in said the housing (1), between which the carrier medium flows through said housing (1) on along a flow path (7), having:~~

~~-a light source (9) which directs light to a scattered light center (11) lying on the flow path (7);~~

~~-having a scattered light receiver (13) to receive for a portion of the light scattered on particles in the scattered light center (11); and having~~

~~a scattered light signal amplifier (17) for amplifying to amplify the scattered light signal, wherein the scattered light signal amplifier (17) is being configured as an integration amplifier, wherein characterized in that a filter algorithm step operation is provided for filtering to filter the scattered light signal based on its a slope thereof.~~

13. (CURRENTLY AMENDED) ~~Scattered light detector in accordance with claim 12~~The scattered light detector according to claim 12, wherein, characterized in that~~switching means (19,21) are provided for setting to set the sensitivity of the scattered light receiver (13).~~

14. (CURRENTLY AMENDED) ~~Scattered light detector in accordance with claim 12 or 13~~The scattered light detector according to claim 12, characterized in that~~further comprising a communication interface, in particular to a PC or a network, is provided to communicate with a desktop or a notebook PC.~~

15. (CURRENTLY AMENDED) ~~The S~~scattered light detector in accordance with one of claims 12 to 14~~according to claim 12, characterized in that wherein a switch input is provided for changing to change the sensitivity of the scattered light receiver (13).~~

16. (CURRENTLY AMENDED) ~~The S~~scattered light detector in accordance with one of claims 12 to 15~~according to claim 12, further comprising, characterized in that a temperature sensor (23) is provided in the flow path (7) of the carrier medium.~~

17. (CURRENTLY AMENDED) ~~The S~~scattered light detector in accordance with one of claims 12 to 16~~according to claim 12, further comprising, characterized in that a flowmeter (25) is provided in the flow path (7) of the carrier medium.~~

18. (CURRENTLY AMENDED) ~~The S~~scattered light detector in accordance with according to claim 17, characterized in that wherein the flowmeter (25) consists of~~comprises~~ a thermoelectric air flow sensor and a thermoelectric temperature sensor.

19. (NEW) A method of evaluating a scattered light signal generated by a scattered light receiver when detecting relatively fine particles in a carrier medium, comprising running the scattered light signal through a calibration operation to calibrate the scattered light signal with a reference signal, a drift compensation operation to adapt the scattered light signal to prevailing environmental conditions over a predetermined time period, a temperature compensation operation to compensate for the temperature dependency of the radiated light output of a light source, and/or a sensitivity adjusting operation to adapt the scattered light signal to a required sensitivity.

20. (NEW) A method of evaluating a scattered light signal generated by a scattered light receiver when detecting relatively fine particles in a carrier medium, comprising at least one of calibrating the scattered light signal with a reference signal, adapting the scattered light signal to prevailing environmental conditions over a predetermined time period, compensating for the temperature dependency of the radiated light output of a light source, and/or adapting the scattered light signal to a required sensitivity.